



DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

Petition for Exemption from the Federal Motor

Vehicle Motor Theft Prevention Standard;

VOLVO

AGENCY: National Highway Traffic Safety Administration (NHTSA)

Department of Transportation (DOT).

ACTION: Grant of petition for exemption.

SUMMARY: This document grants in full the Volvo Cars of North America, LLC's (Volvo) petition for exemption of the S60 vehicle line in accordance with 49 CFR Part 543, Exemption from the Theft Prevention Standard. This petition is granted because the agency has determined that the antitheft device to be placed on the line as standard equipment is likely to be as effective in reducing and deterring motor vehicle theft as compliance with the parts-marking requirements of the Theft Prevention Standard (49 CFR Part 541).

DATES: The exemption granted by this notice is effective beginning with the 2014 model year (MY).

FOR FURTHER INFORMATION CONTACT: Ms. Joy Williams, Office of International Policy, Fuel Economy and Consumer Programs, National Highway Traffic Safety Administration, 1200 New Jersey Avenue, S.E., West Building, Room W43-455, Washington, DC 20590. Ms. Williams's telephone number is (202) 366-0846. Her fax number is (202) 493-2990.

SUPPLEMENTAL INFORMATION: In a petition dated October 16, 2012, Volvo requested an exemption from the parts-marking requirements of the Theft Prevention Standard (49 CFR Part 541) for the S60 vehicle line beginning with MY 2014. The petition requested exemption from parts-marking pursuant to 49 CFR Part 543, *Exemption from Vehicle Theft Prevention Standard*, based on the installation of an antitheft device as standard equipment for the entire vehicle line.

Under §543.5(a), a manufacturer may petition NHTSA to grant an exemption for one vehicle line per model year. In its petition, Volvo provided a detailed description and diagram of the identity, design, and location of the components of the antitheft device for its S60 vehicle line. Volvo stated that beginning with MY 2014, all S60 vehicles will be equipped with a passive antitheft device as standard equipment. Volvo further stated that the antitheft device proposed for installation on the MY 2014 Volvo S60 vehicles will consist of three (3) systems: an alarm, a central locking system and an immobilizer. Key components of the antitheft device consist of a Driver Information Module, Immobilizer Antenna Unit (IAU), Brake Control Module, Transmission Control Module, Engine Control Module, Central Electronic Module (CEM), Phone Module (not available in the US), and the Keyless Vehicle Module. Volvo stated that currently, the Volvo S60 vehicle line is comprised of the S60 T5, T5 AWD, T6 SWD and T6 R models, which are all built on the same chassis/platform.

Volvo stated that the antitheft device for the S60 vehicle line will incorporate a central locking system that will allow either remote control key (physical key) or keyless remote vehicle entry. In both versions of the central locking system, when the vehicle is locked, the alarm is armed, the immobilizer unit is activated and electronic monitoring for unauthorized entry becomes active. Volvo stated that the physical key in the driver's door lock will not set the

alarm, but will activate the immobilizer. Volvo further stated that when an unlock command is received, the alarm will be de-activated and the immobilizer will remain active until the programmed remote control key is inserted into the ignition switch, or a keyless remote key and the unlock sensor in the external door handle is recognized. Volvo's submission is considered a complete petition as required by 49 CFR 543.7, in that it meets the general requirements contained in §543.5 and the specific content requirements of §543.6.

On the remote control key system, the remote control key must be inserted into the ignition in order to start the vehicle. When the start button is depressed, the CEM transmits a command to the IAU for a remote control key identity check. The IAU activates the built in antenna and reads off the identity code from the remote control key transponder. The code is then transmitted to the CEM and compared to the pre-programmed codes. If the transponder codes match, the vehicle can be started.

On the keyless system, the vehicle will attempt to identify a passive remote control key. If the remote control key cannot be found, the CEM will send a request to the IAU to scan for a transponder. If an approved transponder is not identified, the CEM will not send an approved key signal to the IAU and the vehicle will be unable to start

Volvo stated that an alarm system will be installed on the MY 2014 Volvo S60 vehicle line to prevent unwanted access to or manipulation of the vehicle in any way. The alarm will sound and the turn indicators will flash when an unauthorized attempt is made to open the side doors, trunk lid/tailgate or hood. Volvo also stated that the alarm is activated when any attempt is made to start the vehicle without a valid key that is fully integrated into the vehicle's electric system.

After a normal delay time (pre-arm phase), the vehicle is armed when the doors are closed and the vehicle is locked. On the passive key system (keyless vehicles), the device is armed by pushing a button in the outer door handle. In the remote control key-lock system, the device is armed by pressing the lock button on the remote control key. Disarming the remote control key systems occurs when the operator presses the unlock button on the remote control key or inserts a valid remote control key into the ignition lock. On the passive key system (keyless vehicles), Volvo states that the vehicle can be disarmed when a valid key is recognized and the outer door handle is pulled. The vehicle is also disarmed when any door, hood or trunk lid/tailgate is opened during the device's pre-arming time.

Volvo believes that the antitheft device that is standard on the MY 2014 S60 vehicle line is effective in reducing and deterring motor vehicle theft. Volvo stated that the premise for this belief originates from the theft data released by the NHTSA for model years (MYs) 2007-2010 vehicles and the Highway Loss Data Institute's (HLDI's) MYs 2007-2009 *Insurance Theft Losses for Passenger Vehicles* as produced in the Insurance Institute for Highway Safety's August 3, 2010 *Status Report* publication.

Volvo stated that it introduced the immobilizer as standard equipment beginning with its MY 1999 vehicle and that the MY 2007 Volvo S80 vehicle line has had the same antitheft device as proposed for the MY 2014 S60 vehicles since its introduction. Theft data for the MYs 2007-2010 Volvo S80 were 0.9255, 0.4373, 0.6749 and 0.3407 respectively. In addition, Volvo's submission provided an illustration of the industry average for thefts for MYs 2007 through 2012 vehicles. According to Volvo, the industry average for MYs 2007-2012 are 1.86, 1.69, 1.33 and 1.17 respectively, ranking the Volvo S80 well below the industry average for thefts.

In addressing the specific content requirements of 543.6, Volvo provided information on the reliability and durability of its device. To ensure reliability and durability of the device, Volvo conducted tests based on its own specified standards and believes that the device is reliable and durable since the device complied with its specified requirements for each test. Volvo stated that its testing requirements refer to both the Swedish Standard Institute ISO 16750 and Electromagnetic Compatibility (EMC) tests and that all components that are included in the functionality of the alarm are also tested for reliability and durability. As additional security measures, Volvo stated that its spare or replacement remote control keys can only be obtained through authorized Volvo retailers and each key has a unique identification defined by Volvo. Volvo also stated that to reduce or eliminate the marketability of stolen electronic components within its vehicles, certain electronic modules are made vehicle-specific and are programmed with certain codes that enable its use within the system of the corresponding vehicle. Consequently, the engine will not start if these numbers do not correspond.

Based on the supporting evidence submitted by Volvo, the agency believes that the anti-theft device for the Volvo S60 vehicle line is likely to be as effective in reducing and deterring motor vehicle theft as compliance with the parts-marking requirements of the Theft Prevention Standard (49 CFR Part 541). The agency concludes that the device will provide the five types of performance listed in §543.6(a)(3): attract attention to the efforts of an authorized person to enter or move a vehicle by means other than a key; promoting activation; preventing defeat or circumvention of the device by unauthorized persons; preventing operation of the vehicle by unauthorized entrants; and ensuring the reliability and durability of the device.

Pursuant to 49 U.S.C. 33106 and 49 CFR 543.7 (b), the agency grants a petition for exemption from the parts-marking requirements of Part 541, either in whole or in part, if it

determines that, based upon supporting evidence, the standard equipment antitheft device is likely to be as effective in reducing and deterring motor vehicle theft as compliance with the parts-marking requirements of Part 541. The agency finds that Volvo has provided adequate reasons for its belief that the antitheft device for the S60 vehicle line is likely to be as effective in reducing and deterring motor vehicle theft as compliance with the parts-marking requirements of the Theft Prevention Standard (49 CFR Part 541). This conclusion is based on the information Volvo provided about its device.

For the foregoing reasons, the agency hereby grants in full Volvo's petition for exemption for the MY 2014 S60 vehicle line from the parts-marking requirements of 49 CFR Part 541. The agency notes that 49 CFR Part 541, Appendix A-1, identifies those lines that are exempted from the Theft Prevention Standard for a given MY. 49 CFR Part 543.7(f) contains publication requirements incident to the disposition of all Part 543 petitions. Advanced listing, including the release of future product nameplates, the beginning model year for which the petition is granted and a general description of the antitheft device is necessary in order to notify law enforcement agencies of new vehicle lines exempted from the parts-marking requirements of the Theft Prevention Standard.

If Volvo decides not to use the exemption for this line, it must formally notify the agency. If such a decision is made, the line must be fully marked as required by 49 CFR Parts 541.5 and 541.6 (marking of major component parts and replacement parts).

NHTSA notes that if Volvo wishes in the future to modify the device on which this exemption is based, the company may have to submit a petition to modify the exemption. Part 543.7(d) states that a Part 543 exemption applies only to vehicles that belong to a line exempted under this part and equipped with the anti-theft device on which the line's exemption

is based. Further, §543.9(c)(2) provides for the submission of petitions “to modify an exemption to permit the use of an antitheft device similar to but differing from the one specified in that exemption.”

The agency wishes to minimize the administrative burden that Part 543.9(c)(2) could place on exempted vehicle manufacturers and itself. The agency did not intend Part 543 to require the submission of a modification petition for every change to the components or design of an antitheft device. The significance of many such changes could be *de minimis*. Therefore, NHTSA suggests that if the manufacturer contemplates making any changes the effects of which might be characterized as *de minimis*, it should consult the agency before preparing and submitting a petition to modify.

Authority: 49 U.S.C. 33106; delegation of authority at 49 CFR 1.50.

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Christopher J. Bonanti
Associate Administrator for
Rulemaking

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